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**SERVICE QUALITY ASSESSMENT IN PT. INDOKEMIKA JAYATAMA USING
INDSERV SCALE AND IMPORTANCE-PERFORMANCE ANALYSIS**

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Abstract— Everyday, competition in the business landscape is always increasing. In the year 2012, its 25th year of establishment, PT Indokemika Jayatama tries to achieve its goal to become the leading player in the chemicals trading and distribution business. To achieve goal to become leading player, Indokemika needs to better understand market's perception toward its service quality. This study aimed to achieve that understanding by conducting a market survey, followed by gap analysis in service quality dimensions described by INDSERV scale, which Gounaris introduced in 2005, and focusing the target using Importance-Performance Analysis by Martilla and James (1977). Questionnaires, containing 21 questions to explain B2B service quality attributes, were sent to Indokemika's active customers. The Performance-Importance Gap Analysis and Importance-Performance Analysis (IPA) Map inferred that Indokemika's performance of service quality is perceived as lower than customers' perceived importance. This is showed by the positive gap score with average gap score at 0.302, and 14 attributes dominated by Hard Process and Output Quality dimension of INDSERV scale are above the average gap. The IPA Map then indicates that the quality attribute that needs improvement, which has the third highest gap score, is 'Look after customer's interest' of the Soft Process Quality dimension. Thus, Indokemika should focus improvement in that direction.

Keywords: Perceived service quality, INDSERV, Performance-Importance Gap, IPA Map

1. Introduction

In developed economies where it is easy to set up a business, increasing market share is always difficult because of increased competition. Simply put, no matter what idea you have or business model you put in place there is always someone else competing with you for customers (Amerland, 2012). Every day, competition in the business landscape is always increasing. In the year 2012, its 25th year of establishment and after undergoing restructurization in the previous year, Indokemika tries to reposition itself in the market to be able to achieve its goal to become the market leader.

PT Indokemika Jayatama (Indokemika) was founded in 1987 as a distributor for Indonesia's leading group of chemical producers. Indokemika is a part of Salim Chemicals Division of Salim Group. Increased demand for the chemical products in Indonesia's other industrial centers prompted Indokemika to expand. In 1990 Indokemika opened a branch in Bandung followed by another branch in 1996 in Semarang. Indokemika then opened representative offices in Medan in 2007 and also representative offices in Cirebon and Solo in the year 2009. The next year, Indokemika opened representative office in Bali. Indokemika's newest branch, Makassar, was established in 2011.

Indokemika's Vision

"To be a leading and respectable chemicals trading and distribution company in Indonesia and to satisfy customers' needs by providing good quality products and services at competitive prices"

Indokemika's Mission

"Understanding the customers' needs and closely monitoring the industry to gain competitive edge by using integrated information system and well structured organization"

Indokemika's main business activity is to trade chemical materials products to various industries in Indonesia. As an ever growing company, Indokemika is always trying to improve its portfolio. For several years prior to 2011, Indokemika's businesses are divided into five product divisions: Industrial (general) Chemicals, Coating & Ink Chemicals, Plastics & Rubber Chemicals, Food Chemicals, and Cosmetics & Oleochemical division. In terms of revenue generated, Industrial Chemicals contributes the biggest portion, which is around 50%. This is followed by Plastic and Rubber Chemicals with 20% revenue contribution. Though generating higher revenue, the kind of products served by those divisions is typically commodity products with tight margin. Other divisions such as Cosmetics, Food Ingredients deals mostly with specialty products which are smaller in quantity but higher in margin generated.

Working Unit

Indokemika's human resources consists of approximately 300 persons, 50% of it is concentrated in the commercial side of business (Sales and Marketing) while the rest is business support (Accounting, Finance, Procurement, Logistics, Collection, HR & GA). The latest restructuring in Indokemika in year 2011 separated the function of sales and marketing.

Business Issue

As business getting more competitive every day, sales must be able to deal with new players in the business that always try to penetrate the market. The increasing competition sometimes led the companies to enter a price-war situation. To minimize the price-war possibilities, every sales person has to maintain good relationship with the customers. The increasing competition in the downstream market sometimes forces the customers to seek for the best price for the same quality products in the market. Even if other competitors can match or beat Indokemika's price, the ideal scenario would be customers still prefer to do business with Indokemika. That is where customer satisfaction level will determine customers' decision to buy.

When suppliers meet customers' needs, desires and requests, thus increasing the satisfaction level of their customers, they can in the long term expect a positive effect regarding the profitability of their businesses (Helgesen, 2007). Therefore, it is important for Indokemika to satisfy its customers. The questions that need to be answered by this research are: (1) How is customer's perception toward Indokemika's service quality? (2) Which area of improvement is needed for Indokemika's service quality? (3) What future actions need to be done for the improvements to be achieved?

2. Business Issue Exploration

To be able to compete better in the market, the company tries to observe customers' satisfaction level and how it affects company performance. Customer satisfaction is perceived as being a key driver of long-term relationships between suppliers and buyers, as it is positively related to customer loyalty and customer profitability (Helgesen, 2007). Customer satisfaction is affected by several factors. Three major factors that influence customer satisfaction are *product quality*, *price*, and *service quality*. Since product quality and price are certain and relatively easier to be measured and compared, competing in product quality and pricing are usually not the main issue in the competition. Service quality is somewhat more abstract than the other two, because it involves customers' experience toward the company's service level. Thus measuring service quality might provide challenge for the company. Bhattacharjee, (2010), suggests that service quality measurement and improvement is one of the most significant strategic tools for enhancing efficiency and business growth. Realizing the importance of service quality measurement, this research is focusing on that particular area of service quality.

As time goes by, Indokemika's performance grows year by year. Even though macro economical crisis hit the market twice in the last five years, which is end of 2008 and beginning of 2012, Indokemika was still able to keep its performance level not to drop. In terms of workforce, Indokemika is still adding new employees, mostly to improve sales force, and any other areas that need to be improved. Employee turnover is a normal thing and generally will not destabilize Indokemika's performance. Indokemika's business as a chemical trading and distribution company has similar and blending of characteristics with that of service and B2B industries. Though operating in the B2B context, the approaches toward customers are somewhat similar to service industries'. The chemical trading and distribution business is a still growing business and new players are emerging every day. The chemical trading and distribution business is a still growing business and new players are emerging every day. Simply said, a company with strong financial power and extensive network might try to enter the market.

Customer Profile and Attitude

Indokemika's customers are ranging from as big as Multi National Companies such as Unilever, KAO, L'Oreal, to as small as home industries that produces non-branded detergent, food (cookies) packaging, and many more. The attitudes of the customers are different but we can draw some specific characteristics among similar industries. Normally Indokemika separate customers' general business type into two: commodity business and specialty business. Commodity business is usually dealing with big volumes and tight margin. Because it is not hard to replace a product with another product in this commodity type of business, penetrating the market will be easier but customer retention could be challenging. On the other hand, specialty business needs more patient approach since product replacement can't be executed as easy as commodity business. Hence, entering the market would be tough but once we established our existence, it would not be as hard to retain the customers.

Indokemika's Suppliers

Indokemika has been working with local and foreign chemical manufacturers for years. Some of the major suppliers are Styron Indonesia, Chimei Corporation (Taiwan), Styrimdo Mono Indonesia, Huntsman Tioxide (UK), Albright and Wilson, Petrocentral, Borregaard, Aditya Birla, etc. Indokemika also owns a manufacturing presence in the surfactant business.

Marketing and Distribution Line

To reach every corner in Indonesia, Indokemika now has established 9 branches that spread throughout this country. Every branch holds some inventory and is supported by at least one sales representative. The bigger and older branches have more resources compared to the younger branches. The newer branches with limited warehouse space are expansions of nearby bigger branches. For example, Solo branch was used to be part of Semarang branch, whereas Cirebon and Bandung branch. This research however is using the old area separation that brings four major regions: Jakarta, Surabaya, Bandung, and Semarang.

A. Conceptual Framework

One of the most widely used methods to measure the service quality level is the SERVQUAL method. Parasuraman et al (1988) described service quality into five aspects: *Reliability*, *Assurance*, *Tangibles*, *Empathy*, and *Responsiveness* (RATER). SERVQUAL is most valuable when it is used periodically to track service quality trends, and when it is used in conjunction with other forms of service quality measurement. (Parasuraman et al, 1988). In the service realm, most of the researches focused on measuring service quality in the consumer sector are particularly using the SERVQUAL scale (Gounaris, 2005). However, since the scale originally meant for consumer goods sector, it gave mixed results for B2B context, hence led Gounaris (2005) to develop an alternative measure, named INDSEV.

INDSERV Model

INDSERV method's difference from SERVQUAL is that rather than using RATER, INDSERV is comprised of five dimensions: *Potential*, *Hard*, *Soft*, *Immediate Output*, and *Final Output Quality*. However, Gounaris's empirical finding showed that *Immediate Output* and *Final Output Quality* can be combined into a single dimension of *Output Quality* (Gounaris, 2005).

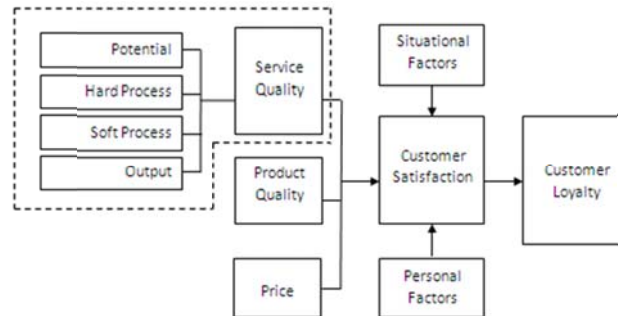


Figure 1. Service Quality Conceptual Framework

Gounaris (2005) describes the dimensions related with INDSERV as follows:

- Potential Quality

The quality that represents an important element of perceived quality because it corresponds to search attributes that organizational customers need to evaluate and consider in advance of the provision of the service.

- Hard Process Quality

Hard process quality explains the customer's concerns regarding the processes through which the service is actually delivered and the evaluation of the suitability of these processes to produce a solution timely and according to the customer's needs.

- Soft Process Quality

This quality interprets the customer's evaluation regarding the interaction with the first line personnel from the provider with whom an interaction is developed as a result of the serving effort.

- Output Quality

This output quality explains the customer's concern regarding the actual offering delivered, as well as the impact that the service delivered eventually produces for the customer.

By applying the INDSERV model, the framework can be concluded as shown in Figure 1. The research focus is shown by the area bordered by dashed lines.

B. Method of Data Collection and Analysis

Importance-Performance Analysis

Importance-Performance Analysis by Martilla and James (1977) is a tool which has been found useful for evaluating the elements of a marketing program. After the initial article by Martilla and James, studies have been trying to develop & improve the tool, for example by Lee et al (2008). The simple importance-performance map can be seen in Figure 2.

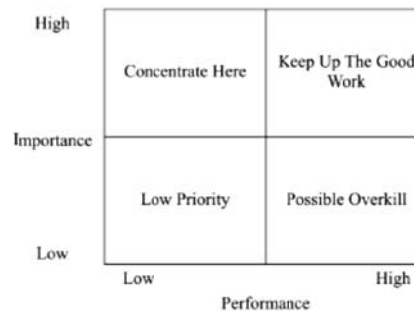


Figure 2. Importance-Performance Analysis Map

Lee, et al (2008) gave the interpretation of the importance-performance map which is provided in the four quadrants, as below:

1. Concentrate here → High importance, low performance
2. Keep up the good work. → High importance, high performance
3. Low priority → Low importance, low performance
4. Possible overkill → Low importance, high performance

Using this Importance-Performance Analysis, we can obtain another view for analyzing service quality assessment that uses INDSERV model. Using the questions from INDSERV that can describe the four level of quality and use it as the quality attributes for the IPA, we can then place each attributes on the IPA map and analyze which aspect of quality that needs improvement.

Sample Population, Size, and Limitation

The research's sample population is limited only to customers of Indokemika. According to Indokemika's database, the total active customers, which are customers that placed purchase order to Indokemika during the period of year 2011 up to 2012 year-to-date, are as much as 2370 customers, nationally. The theory that is widely used in determining sample size is Slovin's formula. The formula is as following (Ariola, 2006):

$$n = N / (1 + (N \times e^2))$$

Where,

n = sample size; N = population; e = margin of error

This formula is based on the calculation using 95% confidence level with a standard margin of error of 5%. According to an article by DataStar (2008), often an acceptable margin of error used by survey researchers falls between 4% and 8% at the 95% confidence level. Basing on this statement, the biggest margin of error, 8%, will yield the minimum number of sample as much as 147.

Sampling Method

Stratified random sampling could give broader view about what is customers' perception of Indokemika's service quality in different regions. However, since this research is intended to get a result that represents the situation in the whole company, the most suited sampling method would be simple random sampling. This sampling design has the least bias and offers the most generalizability (Sekaran, 2003)

Survey Form Design

Customer survey form was designed using attributes generated from INDSERV model. The 21 questions that represent the attributes are shown in Table 1.

Table 1 . List of Survey Questions

1	Ease of contact	Potential
2	Ease of obtaining product pricing	
3	Ease of obtaining product information	
4	Level of technical service support	
5	Quality of product	
6	Network of principals/partners	
7	Fulfillment of special request	Hard Process
8	Ability to deliver the order in full	
9	Ability to deliver the order on time	
10	Completeness and accuracy of documents	

11	Understands customer's needs	Soft Process
12	Enthusiasm of sales staff	
13	Handling of complaints	
14	Responsiveness to queries	
15	Professionalism and courtesy of sales staff	
16	Visit frequency of sales staff	
17	Look after customer's interests	
18	Help customer to reach Objectives	Output
19	Actually delivering benefit for customer	
20	Contributes to customer's sales/image	
21	Can accommodate customer's strategy	

The scoring was using 7 point Likert-scale, and taking suggestion from the article by Martilla and James (1977), the importance and performance measurement is separated to minimize compounding and order effects. Customers were also given space to give additional comments. This comment space gave the opportunity to the customers to freely share their opinions toward Indokemika's services. These comments are the source of qualitative data that might be used to assess Indokemika's service quality.

3. Business Solution

A. Alternative Business Solution

For the company to be able to enhance customer satisfaction to win in the competitive market, the alternative paths are: lowering price, increasing quality, and optimizing service quality. Since this research focus is on the impact of service quality toward customer satisfaction, the business solution would be optimizing service quality.

B. Analysis of Business Solution

From 2370 Indokemika's active customers, as much as 173 companies that varies in line of business, geographic location, and sizes, have responded to the survey form and give feedback. By using survey data from 173 customers, the margin of error would be approximately 7.5%, which is within the acceptable 4 to 8% range.

Data Analysis

The proportion of the customers responding to the survey, based on product division, which relates to customers' nature of business, is as shown in Table 2.

Table 2. Customer Proportion Based on Survey Respondent

Sales Division	Respondents	Percentage
Industrial Chemical	21	12%
Plastics & Rubber Chemicals	75	43%
Oleochemical & Cosmetics	29	17%
Coating & Ink Chemicals	28	16%
Food	20	12%
TOTAL	173	100%

The proportion of the customers responding to the survey, based on sales region (branch offices) is shown in Table 3.

Table 3. Customer Proportion Based on Survey Respondent

Sales Region	Respondents	Percentage
Jakarta (+ Medan)	67	39%
Surabaya + Makassar	44	25%
Bandung + Cirebon	46	27%
Semarang + Solo	16	9%
TOTAL	173	100%

Mapping of Customers' Concerns and Comments

The concerns and comments are categorized into 8 items: stock availability, product variation, price, product quality, term of payment, on time delivery, exchange rate, and technical support. The proportion is shown in Figure 3.

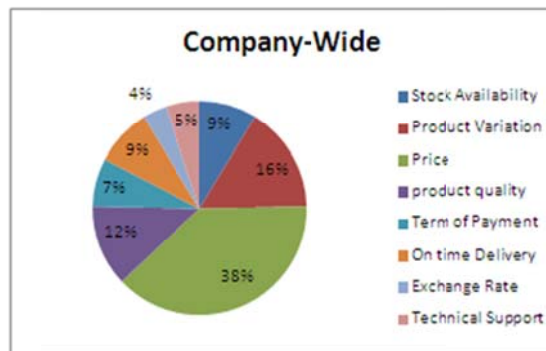


Figure 3. Proportions of Customers' Comments

Figure 3 shows that the aspect that major concern for customers is price at 38% proportion, while product quality at 12%. These two aspects, combined with service quality, are the major factors that influence customer satisfaction. Since the other concerns that can be associated to service quality, from Figure 3, it can be inferred that, service quality is a major concern of Indokemika's customers.

Performance- Importance Gap Analysis

The Performance-Importance Gap Analysis is the easiest and simplest way to assess customers' perception toward the service quality attributes. The bigger the gap, the wider the gulf between the levels of performance that customer expected from the company, and the performance level shown by the company itself. The data, sorted from the largest to the smallest, of Indokemika's Performance and Importance Gap can be seen in Table 4.

It can be seen that 14 of the 21 attributes have bigger gap than the average Performance – Importance gap of 0.302. It means that in every quality attribute, the average customer perception on Indokemika's performance in service is lower than customers' expectation, although higher attention should be given to the upper 14 attributes. Table 4 shows that all Hard Process Quality and Output Quality attributes of the INDSEV model are the dominant dimensions of attributes that were placed above the average gap.

Table 4. Indokemika Performance-Importance Gap

Attribute / Description	Question	IMP	PERF	Gap
Fulfillment of special request	Q7	5.88	5.45	0.427
Actually delivering benefit for customer	Q19	5.84	5.44	0.403
Look after customer's interests	Q17	6.06	5.67	0.393
Help customer to reach Objectives	Q18	5.86	5.49	0.374
Ability to deliver the order on time	Q9	6.27	5.90	0.371
Handling of complaints	Q13	6.21	5.84	0.370
Contributes to customer's sales/image	Q20	5.80	5.44	0.357
Completeness and accuracy of documentation	Q10	6.23	5.88	0.350
Understands customer's needs	Q11	6.13	5.79	0.337
Network of principals/partners	Q6	5.78	5.47	0.320
Can accommodate customer's strategy	Q21	5.65	5.34	0.318
Responsiveness to queries	Q14	6.20	5.89	0.312
Level of technical service support	Q4	5.92	5.62	0.309
Ability to deliver the order in full	Q8	6.25	5.94	0.307
Ease of obtaining product pricing	Q2	6.16	5.90	0.260
Ease of obtaining product information	Q3	6.14	5.90	0.243
Ease of contact	Q1	6.36	6.13	0.231
Quality of product	Q5	6.27	6.03	0.231
Enthusiasm of sales staff	Q12	6.20	6.05	0.150
Professionalism and courtesy of sales staff	Q15	6.28	6.14	0.139
Visit frequency of sales staff	Q16	5.44	5.31	0.133
	Average	6.044	5.743	0.302

	= Potential Quality		= Soft Process Quality
	= Hard Process Quality		= Output Quality

This means that customer's perception on how the actual work of service, such as on time delivery, stock availability, also the final benefit that they receive from having business partnership with Indokemika was perceived as lower than they expected. However, having concluded that Hard Process Quality and Output Quality attributes should be given more attention, the target is still not focused enough. IPA Map is needed to obtain a clearer conclusion.

Importance-Performance Analysis (IPA) Map

The importance and performance data scores are inserted to the IPA map. The importance score will take vertical axis, and the performance score takes the horizontal axis. Each question from the survey that represents the varying quality attributes will form into coordinates. To separate low or high score, the mean (average) of importance score and performance score will be used as the central axis that divides the map into four quadrants. The Importance-Performance Analysis Map is shown in Figure 4.

An interesting finding is that all of Output Quality attributes (Q18, Q19, Q20, and Q21) are located in the "Low Priority" quadrant. These attributes, though seems highly important, apparently considered as not so important in customer's view. This might be caused by customer focusing more on the service delivered at present. It is important to see business in a long run, but customers might care more on what we can offer now rather than what we can offer later to them.

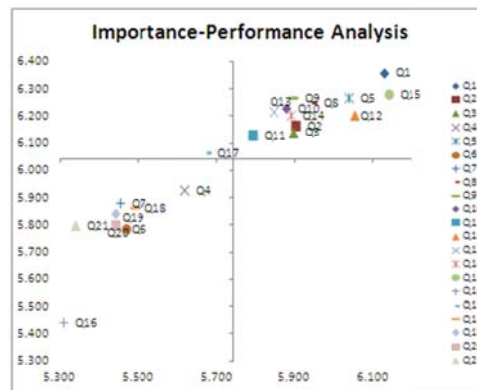


Figure 4. Importance-Performance Analysis Map on Indokemika's Service Quality

Another noticeable attribute is the Q16 (Visit frequency of sales staff). Located in the bottom left corner of IPA map, means though this attribute is not important to the customers but Indokemika's performance is also very low. People might argue that quality of meeting matters over quantity, but unfortunately without enough quantity, the quality can't be delivered. So, this attribute can be considered for future improvement.

On the IPA map, **Q17** (Look after customer's interest) is the aspect that Indokemika need to concentrate in improving. Since this Q17 attribute is a soft process quality attribute, the improvement will mostly depend on sales persons' effort to take a good care of the customers. This can only be done when the company put more effort to move from transactional marketing to relationship marketing. Grönroos (1994) stated that in relationship marketing, customers tend to be less sensitive to price, compared to transactional marketing. As relationship marketing is a long-term focus, it will need time to apply and efforts from not only sales person, but also the whole part of the company to make it happen.

Looking back at the conceptual framework, the end goal should be reaching customer loyalty. This customer loyalty most often results from the customer's assessment of all experiences, not just one single encounter (Zeithaml, et al. 2006). Efforts are needed to continuously improve service quality, that customers will have positive experience toward the company. To build such experience for the

customers that in the end will lead to customer loyalty, Indokemika may need to focus on customer intimacy.

Treacy and Wiersema model (1993) regarding Value Disciplines, suggests that companies should narrow their focus among the three value disciplines: *Operational Excellence*, *Customer Intimacy*, and *Product Leadership*. While Treacy and Wiersema suggest that a successful company should focus on one Value Discipline and perform minimum threshold for the others, there were occasions that a leading company may perform best in two of the three Value Disciplines, for example Toyota that masters the operational excellence as well as product leadership (Treacy and Wiersema, 1993). Building the business through Customer Intimacy is in harmony with the improvement of Soft Process Quality of INDSESV model.

4. Conclusion and Implementation Plan

The research result shows that there is a gap existing between Indokemika's performance and customer's perceived importance on several quality attributes. Indokemika should focus in improving the quality attribute: **Look after customer's interest**. This quality attribute belongs to Soft Process Quality dimension of the INDSESV model. To improve the quality attribute, Indokemika needs to be consistent in developing Customer Intimacy as its Value Discipline and perform needed action plans accordingly. Action plans should be conducted to facilitate the improvement. And to keep up with the minimum threshold of the industry in terms of operational excellence and product leadership, some ideas could also be implemented. The proposed implementation time frame for the action plans is showed in Table 5.

Table 5. Implementation Plan Time Frame

Action Plans		1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Customer Intimacy													
1	Customer Profile Update												
2	Planned Customer Visits												
3	Performance-Importance Gap Tracking												
Operational Excellence													
1	Extra Fleets and Drivers												
	- Assessment												
	- Execution												
	- Review												
2	Warehouse Hubs												
	- Assessment												
	- Execution												
	- Review												
3	Agreement with Expedition												
	- Assessment												
	- Execution												
	- Review												
Product Leadership													
1	Technical Support												
2	Training												
	- At principal's site												
	- At Indokemika's or customer's site												
3	Product Development												
	- Information Gathering												
	- Market mapping												
	- Sampling and feedback												
	- Pre-commercial evaluation												
	- Commercial sales												
		= action exists on month											

References

- Amerland, D., 2012. *How to Increase the Market Share of Your Business*.
<http://helpmyseo.com/web-talk/653-how-to-increase-the-market-share-of-your-business.html>
- Ariola, M. M., 2006. *Principles and Methods of Research*. Manila: Rex Book Store.
- Bhattacharjee, P. K., 2010. A Novel Service Quality Measurement Method with Minimum Attributes (SERVQUAL-MA) of a Service Industry Involving Human Interactions. *International Journal of Innovation, Management and Technology*, Vol. 1, No. 1, April 2010.
- DataStar, 2008. What Every Researcher Should Know About Statistical Significance.
<http://www.surveystar.com/news/oct2008.htm>
- Gounaris, S., 2005. Measuring service quality in b2b services: an evaluation of the SERVQUAL scale vis-à-vis, *Journal of Services Marketing*, Vol. 19 Iss: 6, pp.421 – 435.
- Helgesen, O. 2007. Drivers of customer satisfaction in business-to-business Relationships: A case study of Norwegian fish exporting companies operating globally. *British Food Journal*. Vol. 109 No. 10, 2007
- Lee, G. J., 2010. Measuring business-to-business customer service: A structural re-examination of the INDSERV scale. *African Journal of Business Management*. Vol. 5(8), pp. 3179-3187.
- Martilla, J. A., and James, J. C., 1977. Importance-Performance Analysis. *The Journal of Marketing*, Vol. 41, No. 1 (Jan., 1977), pp. 77-79.
- Parasuraman, A., Zeithaml, V. A., Berry, L. L., 1988. *SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality*. Cambridge: Journal of Retailing, Volume 64, Number 1.
- Sekaran, U., 2003. *Research Methods For Business, A Skill Building Approach*. 4th Edition, USA: John Wiley & Sons.
- Treacy, M. and Wiersema, F., 1993. *Customer Intimacy and Other Value Disciplines*. Harvard Business Review.
- Zeithaml, V. A., Bitner, M. J., Gremler, D. D., 2006. *Services Marketing Integrating Customer Focus Across the Firm*. 4th Edition, New York: McGraw-Hill.